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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,290	04/05/2001	Daniel C. Berg	RSW920000173US1	5722

7590 07/06/2004

Gregory M. Doudnikoff
IBM Corporation T81/503
P.O. Box 12195
Research Triangle Park, NC 27709

EXAMINER

PHAM, CHRYSTINE

ART UNIT	PAPER NUMBER
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2122

DATE MAILED: 07/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/827,290

Applicant(s)

BERG ET AL.

Examiner

Chrystine Pham

Art Unit

2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (pg.2 line 7 & pg.3 line 1). Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Objections

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).
3. Misnumbered claims 11, 12, 13, 14, 15 have been renumbered 10, 11, 12, 13, and 14 respectively.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
Claim 14 recites the limitation "the system according to claim 10" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4, 6-9, 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Rubin (US 5412797) (hereinafter *Rubin*).

As per claim 1, *Rubin* teaches a method for programmatically (e.g., col.5 : 31-35 & 40-45) enforcing referential integrity constraints (e.g., col.6 : 35-37) among associations (e.g., see fig.2 *presents relation 20* & associated text) between class instances (e.g., col.6 : 25-31), comprising steps of:

- o Evaluating (e.g., col.3 : 1-3 & col.11 : 59-64) a request to set an association end (e.g., see *relation 20* fig.2 & associated text) to reflect an association from an instance (e.g., see fig.3 *source instance 26* & associated text) of a first class (e.g., see fig.2 *source 22* & associated text) to an instance (e.g., see fig.3 *sink instance 28* & associated text) of a second class (e.g., see fig.2 *sink 24* & associated text),
- o Setting the requested association end (e.g., col.2 : 40-43 & 52-56); and
- o Programmatically modifying an inverse association end (e.g., see fig.4 *is presented by 40* & associated text) of the association to reflect an inverse association from the instance of the second class to the instance of the first class (e.g., col.3 : 4-9 & col.2 : 52-56).

As per claim 2, *Rubin* teaches a method as applied to claim 1, wherein the evaluating step further comprises determining (e.g., col.11 : 59-64) whether the association end has a single

multiplicity (e.g., see fig.5 27, 36, & 38; fig2. 20; fig.4 *fanpresents* 31, & *fan* 30) or a many multiplicity (e.g., see fig.4 *ispresentedby* 40 & *toone* 41; fig.5 46) (e.g., col.7 : 10-32).

As per claim 3, *Rubin* teaches a method as applied to claim 2, wherein the setting and programmatically modifying steps for a particular association end that has a single multiplicity further comprise steps of:

- o Disconnecting (e.g., col.3 : 4-9; col.10 : 38-46; see fig.9 & associated text) the inverse association end from an existing instance, if any;
- o Performing the programmatically modifying step after performing the disconnecting step (e.g., col.9 : 49-51 & 56-59; fig.8 & associated text); and
- o Performing the setting step after performing the disconnecting step (e.g., col.9 : 59-61; fig.8 & associated text).

As per claim 4, *Rubin* teaches a method as applied to claim 2, wherein the setting and programmatically modifying steps for a particular association end that has a many multiplicity further comprise steps of:

- o Performing the setting step (e.g., col.9 : 59-61; fig.8 & associated text),
- o Disconnecting the inverse association end from an existing instance, if any, after performing the setting step (e.g., col.10 : 38-46; fig.9 & associated text); and
- o Performing the programmatically modifying step after performing the setting step (e.g., col.9 : 56-59; fig.8 & associated text).

As per claim 6, *Rubin* teaches a method according to claim 1, wherein the method is provided as link helper objects (e.g., see fig.5 27, 39, 31, 40 & associated text; col.7 : 10-32).

As per claim 7, *Rubin* teaches a computer program product for programmatically (e.g., col.5 : 31-35 & 40-45) enforcing referential integrity constraints (e.g., col.6 : 35-37) among

associations (e.g., see fig.2 *presents relation 20* & associated text) between class instances (e.g., col.6 : 25-31), wherein the computer program product is embodied on one or more computer readable media (e.g., fig.1 *storage device 16* & associated text; see *disk* col.6 : 19-23) and comprises:

- Computer-readable program code means for evaluating (e.g., col.3 : 1-3 & col.11 : 59-64) a request to set an association end (e.g., see *relation 20* fig.2 & associated text) to reflect an association from an instance (e.g., see fig.3 *source instance 26* & associated text) of a first class (e.g., see fig.2 *source 22* & associated text) to an instance (e.g., see fig.3 *sink instance 28* & associated text) of a second class (e.g., see fig.2 *sink 24* & associated text),
- Computer-readable program code means for setting the requested association end (e.g., col.2 : 40-43 & 52-56); and
- Computer-readable program code means for programmatically modifying an inverse association end (e.g., see fig.4 *is presented by 40* & associated text) of the association to reflect an inverse association from the instance of the second class to the instance of the first class (e.g., col.3 : 4-9 & col.2 : 52-56).

As per claims 8 and 9, they recite limitations, which have been addressed in claims 2 and 3-4 respectively, therefore, are rejected for the same reasons as cited in claims 2, and 3-4.

As per claim 11, *Rubin* teaches a system (e.g., fig.1 & associated text) for programmatically (e.g., col.5 : 31-35 & 40-45) enforcing referential integrity constraints (e.g., col.6 : 35-37) among associations (e.g., see fig.2 *presents relation 20* & associated text) between class instances (e.g., col.6 : 25-31), comprising:

- Means for evaluating (e.g., col.3 : 1-3 & col.11 : 59-64) a request to set an association end (e.g., see *relation 20* fig.2 & associated text) to reflect an association from an instance (e.g., see fig.3 *source instance 26* & associated text) of a first class

(e.g., see fig.2 *source* 22 & associated text) to an instance (e.g., see fig.3 *sink* instance 28 & associated text) of a second class (e.g., see fig.2 *sink* 24 & associated text);

- o Means for setting the requested association end (e.g., col.2 : 40-43 & 52-56); and
- o Means for programmatically modifying an inverse association end (e.g., see fig.4 *isrepresentedby* 40 & associated text) of the association to reflect an inverse association from the instance of the second class to the instance of the first class (e.g., col.3 : 4-9 & col.2 : 52-56).

As per claims 12-13, they recite limitations which have been addressed in claims 2-4, therefore, are rejected for the same reasons as cited in claims 2-4.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 5 & 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rubin* in view of Johnson (<http://www.javaworld.com/javaworld/jw-02-1998/jw-02-beans.html>) (hereinafter *Johnson*).

As per claim 5, *Rubin* teaches a method as applied to claim 1, further comprising steps of determining whether the association end or the inverse association end is a primary end of the association (e.g., see fig.4 *isrepresentedby* 40 & *toone* 41; fig.5 46; associated text; col.10 : 66 - col.11 : 6 & 59-64) but fails to teach serializing only the primary end of the association during a serialization operation. *Johnson* teaches a method of selectively serializing JAVA objects

(classes, instances of classes, fields), that is to say, serializing of only the primary end of the association during a serialization operation (e.g., see section *Serial killers: How to avoid unwanted serialization*, pg. 12, 2nd par.-4th par.). Therefore, one of ordinary skill in the pertinent art, at the time the invention was made, would have been motivated to modify the teaching of *Rubin* to include serialization of the association's primary end as to transform it into persistent data which can be stored, transmitted, recreated, and retrieved at another place and time.

As per claim 10, it recites limitations, which have been previously addressed in claim 5, therefore is rejected for the same reasons as cited in claim 5.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:
 - o Method and apparatus for generating a user interface from the entity/attribute/relationship model of a database, Cason et al. (US 6035300).
 - o System of reusable software parts and methods of use, Miloushev et al. (US 20030135850).
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chrystine Pham whose telephone number is 703.605.1219. The examiner can normally be reached on Mon-Fri, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q Dam can be reached on 703.305.4552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Chrystine Pham
Examiner
GAU 2122

A handwritten signature in black ink, appearing to read 'Tuan Dam', with a long horizontal flourish extending to the right.

TUAN DAM
SUPERVISORY PATENT EXAMINER